



TELECOM

Warren County - Ohio

Who we are
 What we do
 Where we are going
 Why we exist

Annual Report
 2015

- | Administrative Team
- | Computer-Aided Dispatch / Records Team (CRT)
- | Data Systems Team (DST)
- | Radio Systems Team (RST)
- | Telephone Systems Team (TST)



2015 Financial Overview

Revenue

Equipment/Service Invoicing	
-Telephone Division	\$30,891.69
-Data Systems Division	13,594.15
-Radio Systems Division	42,880.90
-CAD/Records Team	54,649.40
Telephone Services	275,928.26
Cellular/Pager Services	81,592.98
Mobile Data Receivables	95,633.75
IC Solutions Inmate Services	<u>131,459.74</u>
	\$754,550.87

Expenditures

Payroll	\$1,094,035.77
Other	3,137.02
Benefits/Insurance	416,053.75
Operating Costs	1,413,491.74
Capital Costs	<u>1,009,907.18</u>
	\$3,936,625.46

From the Director

Another busy and productive year for Telecom, 2015 saw renovation and rejuvenation. We started the year with several divisions working tirelessly to move the Prosecutor's Office, Court Services, Emergency Services, EOC, and Board of Elections to their new homes at 520 Justice Drive. Our CAD/Records, Data Systems, Radio, and Telephone teams played integral roles in running lines, cables, outfitting dispatcher stations, and testing the numerous software applications they would run from their computers.

Through a lengthy and tedious RFP process, we also vetted and secured a new 9-1-1 System with INdigital catapulting Warren County into the NexGen (Next Generation) 9-1-1 era where citizens will be able to text/picture message their concerns into our Dispatch center. We also completed the RFP process and chose a CAD system with the vendor TriTech. We crafted and released the RFP for a new phone system, and completed our first upgrade of the digital radio system from version 7.13 to 7.15.

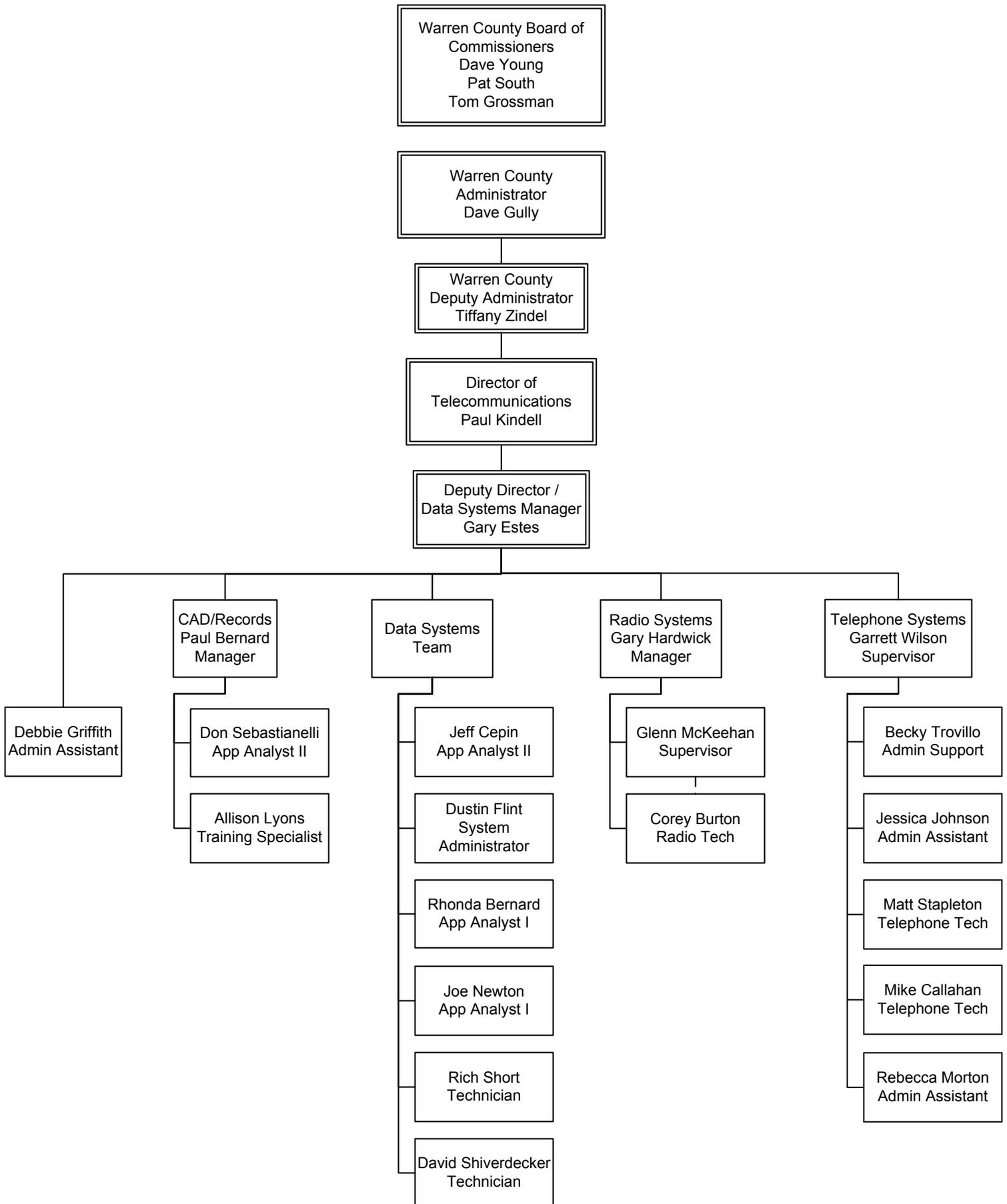
2015 was also a year of transition for Telecom; saying goodbye to long-time coworkers and ushering in our next generation. Adela Dingman, Telephone Systems Supervisor retired and Garrett "Geezer" Wilson came back to assume her position. Scott Boschert, Data Systems Supervisor followed his calling to be a nurse, prompting promotions within Data Systems and a new Applications Analyst I hire. Nick Yeazel, Radio Systems Technician took an offer from P&R in Dayton, and in exchange we hired a former P&R programmer/technician to fill his role. We closed the year with promotions, tapping Gary Estes as Deputy Director and promoting Becky Trovillo and Jessica Johnson in the Telephone Systems division.



Paul Kindell,
 Director 2006-Present

Organizational Chart

(as of 1/6/16)



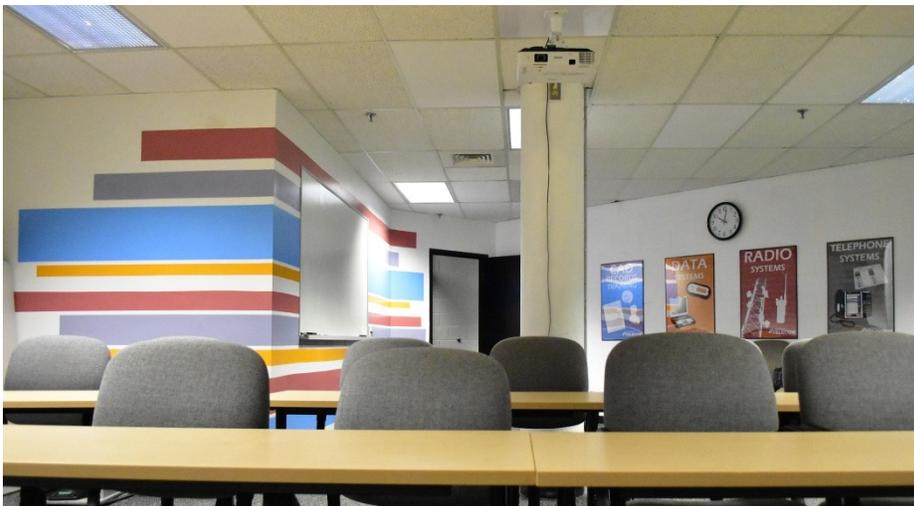
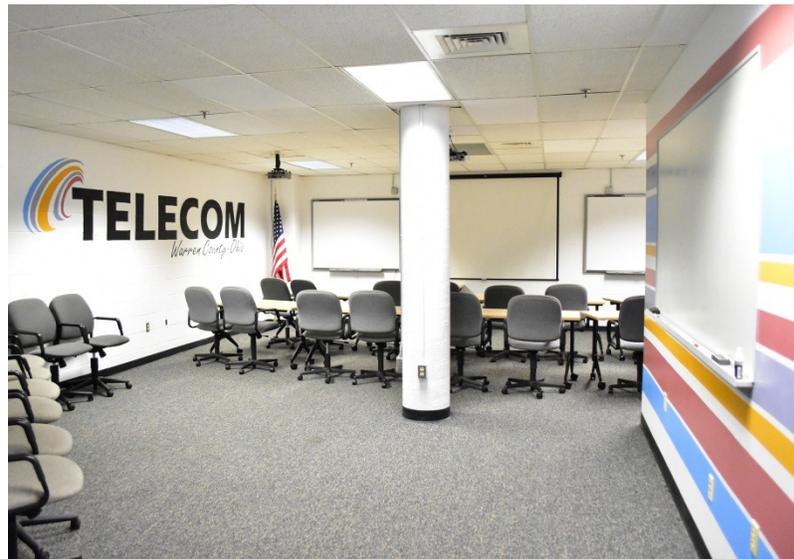
Computer-Aided Dispatch / Records Team (3 employees)

Team Lead: Paul Bernard

Purpose	5-Year Goals
<ul style="list-style-type: none"> ▪ Computer-Aided Dispatch - Troubleshoot, configure, and monitor the software that Emergency Services Dispatchers use to recommend law and fire responses. Work with public safety agencies to set up their response tables and apparatus. ▪ Records Management - retrieves and packages records requests (9-1-1 / CAD) for Emergency Services. Maintains the Fire Records program. Retrieves 9-1-1 phone recordings from AudioLog software and ensures the servers stay up and running. ▪ Reporting - queries and runs monthly reports for phone system, CAD, 9-1-1, and radio available for related agencies and the public. End-of-year totals for 9-1-1 calls, CAD statistics, fire, and law runs by agency or area. Can also pull LRMS-DSS and CAD-DSS (Decision Support Software) reports if requested by a public-safety agency. ▪ Mapping - maintain the master map which Computer-Aided Dispatch software pulls from for Dispatch. Same data is used for map requests and the BINGO map used by public and non-public safety agencies. ▪ Training - develop multi-media training material to educate our users: videos, PowerPoint, flyers, monthly newsletter, manuals, social media outlets. 	<ul style="list-style-type: none"> ▪ Replace current Computer-Aided Dispatch system (Premier CAD) with new CAD program. Submit the Purchase Order in 2015, implement in 2018 which is end of life for current system. ▪ Update Records Management System. ▪ Updating mapping software to support the new CAD and 9-1-1. ✓ Establish a training room to enhance our subscriber teachings.

Telecom Training Room

Following the Department of Emergency Services' move to 520 Justice, Telecom was able to accomplish one of our 5-year goals: establishing a training room. The former EOC received an inexpensive yet impactful facelift with our Telecom Trainer handling the painting and art installs. We revived the Smart Boards and installed an inexpensive wireless adaptor that allows the trainer and other Telecom personnel to wirelessly project presentations, training material, and notes onto the wall without cords or cables. Having a training room will exponentially increase our trainer's ability to teach and demonstrate the various technology and programs with which our users interface. Previously, she could only fit 2 people in her cubicle or would have to schedule trainings at individual departments. Now, we can hold meetings and trainings for multiple departments; impacting more users and fitting more schedules.



Computer-Aided Dispatch / Records Team (3 employees)

Team Lead: Paul Bernard



The Proof is in the Numbers

Customer Service

Took over maintaining and monitoring the WCSO Jail inmate phone calls recording program called ICSolutions (ICS) in August. **16** requests for **933** files (**383mb**) and **5** subpoenas (Radio and Phone Audio Record Requests.) **166** miscellaneous Emergency Services Requests. **44** Help Tickets resolved. **971** receiver devices and **399** receiver groups maintained and configured within Hiplink's **2** servers, sending an average of **2000** messages per day. Hiplink allows incidents from CAD to be automatically sent to subscriber's mobile phones or emails to stay in-the-know even when not on shift or on premise. Assists users with CAD-DSS and LRMS-DSS questions, problems, and custom reports

Mapping

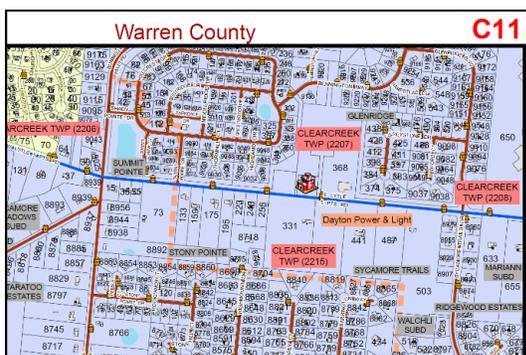
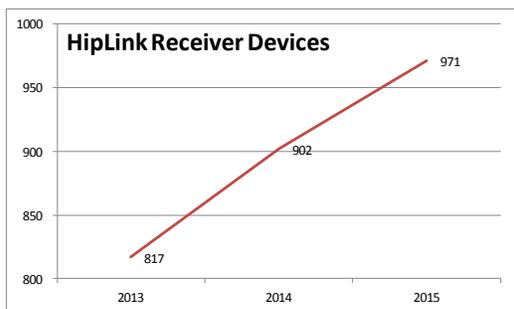
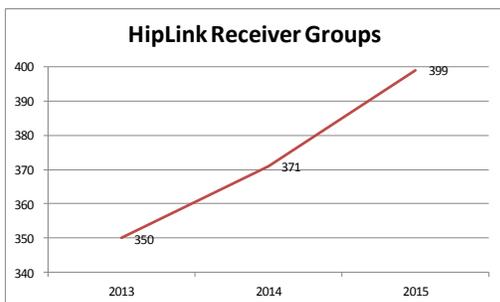
6 Map Uploads to CAD System. **91** MSAG updates (Master Street Address Guide) Feature Changes/Additions: **2,248,640** including **716** Street Feature additions and **162** Common Place additions. **478** page "Bingo" map updated annually and available to everyone. Various requests for printed and pdf bingo/street maps to users.

Reporting / Program Maintenance

41 9-1-1 Call Problem Reports. Creates monthly and yearly reports for CAD, 9-1-1, Radio System, and Dispatch telephone. Axis Cameras Maintenance and configuration of **14** cameras. Maintained, installed, and configured **7** new AudioLog servers and decommissioned **0** servers (captures traffic on dispatch radios and 9-1-1 calls).

Training & Marketing

2,040 minutes spent training fire, police, probation, courts, schools, etc. **10** hours of in-house fire department radio/ePCR/Telecom Suite training. **9** newly hired WCSO Corrections Officers trained on radio. **4** Adult Probation employees trained on radio. **4** newly hired WCSO Deputies. **10** monthly TelecomMatters newsletters, **2** less than usual due to the arrival of **1** baby. **13** Technical Bulletins. **2** training sessions with the United States Army Corps of Engineers. **4** MARCS-in-Schools Radio Training Sessions for newly approved private schools. **43** web pages maintained. **31** website posts. **1** renovated and customized training room. **12** promotional posters in the Telecom offices. **2** Telecom logo murals. **1** striped feature wall in training room. **21** professional in-house headshots at no cost.



Data Systems Team | Team Lead: Gary Estes | 7 employees

Purpose (Warren County Public Safety Network)

Communications Center Technology Environment

- Computer Aided Dispatch (CAD) - Server, interfaces, workstations, required devices and applications, radio system workstations, required devices and applications, 9-1-1 Workstations, required devices and applications
- Genwatch – used for emergency button notification in Franklin and Lebanon Dispatch Centers.

Wants & Warrants

- Open Query Server and Clients allow Dispatchers to access LEADS, NCIC, BMV and other systems as required.
- LEADS Main Terminal – Support for this function for the Communications Center.
- Message Switch – Used by all mobile users in the county. This message switch interfaces CAD, Records, State, Federal databases.

Records Management Systems (RMS)

- Law and Fire/EMS Field Based Reporting
- Law Records Management System (LRMS) - Used by all Agencies except Franklin, Lebanon and Mason. Integrated to CAD and Law Field Based Reporting (LFBR)
- FRMS – Fire/EMS Records Management System - Used by all Agencies, Integrated to CAD and Electronic Patient Care Records (ePCR).

Mobile Environment

- In a secure and managed environment, Agencies have access to all the resources of the Warren County Public Safety Network (WCPSN) via mobile devices - Law Field Based Reporting (LFBR), Electronic Patient Care Records (ePCR), Agencies Mapping, Accident and Scene Diagram and Drawing, Mobile Printing, Drivers License and Document Scanning, In Car Camera Systems, Integration with Regional Licenses Plate Reader systems (LPR), Mobile Messaging – Secure email and chat all Agencies (LAW, FIRE, EMS and Dispatch) to communicate.

Data Center (provides the infrastructure to support the Warren County Public Safety Network.)

- Physical and Virtual Server environments - Reduces cost in physical hardware, operating systems, database platforms and environmental (electric, cooling) – more green.
- Access Infrastructure - Provides WCPSN applications to agencies without expensive site-to-site vpn. Allows users to use almost any client device for access from anywhere (lower cost and risk.)
- Networking - Provides Local Area Networks (LAN), Wide Area Networks (WAN), Cellular and secure connections to mobile environment.
- Standard Operation Environment (SOE) - allows for standardized support, deployment, upgrades and stability lowering downtime and support costs.
- Security - Implementation, upgrade and maintenance of Infection Management Systems, Intrusion Detection Systems, Patch Management Systems, and required logging and analysis systems.
- User Account Management - Creation, deletion, retention, access configuration, password/passphrase/token management for each WCPSN user.
- Messaging and Notification Environment - Allows for emergency and routing notification to users, system-to-system notification, system monitoring.

Driving considerations of DST projects are

(Federal) Criminal Justice Information System (CJIS)

(Federal) Health Insurance Portability and Accountability Act (HIPPA)

(State) Law Enforcement Automated Data Systems (LEADS)

(Local) Commission on Accreditation for Law Enforcement Agencies (CALEA)

5-Year Goals

- New CAD & Records Mgt Support
- New Mobile Data Computers (MDCs)
- Upgrade/maintain systems

The Divisions of Telecommunications

Data Systems Team | Team Lead: Gary Estes | 7 employees

	MDC	RSA	Law	Law	Fire		Remote	Wide
	QTY	Token	RMS	FBR	RMS	ePCR	Access	Area
								Network
								Support

Law Enforcement								
CARLISLE Police	6	8	x	x			x	
CLEARCREEK Police	13	21	x	x			x	
FRANKLIN City Police	8	26					x	
HAMILTON Twp Police	11	22	x	x			x	
HARVEYSBURG Police	2	2	x				x	
LEBANON Police	11	21					x	
MAINEVILLE Police	3	5	x	x			x	
MASON Police	20	24					x	
MORROW Police	3	4	x	x			x	
SPRINGBORO Police	16	36	x	x			x	
WAYNESVILLE Police	4	20	x				x	
WCSO	80	121	x	x			x	
Fire								
CARLISLE Fire	0	2			x			
CLEARCREEK Fire	21	55			x	x	x	
DEERFIELD Twp Fire	15	28			x	x	x	
FRANKLIN Twp Fire	5	2			x	x	x	
HAMILTON Twp Fire	10	19			x	x	x	
HARLAN Twp Fire	4	3			x	x	x	
JEMS	9	15			x	x	x	
LEBANON Fire	2	1					x	
MASON Fire	15	18			x	x	x	
MASSIE Twp Fire	2	3			x	x	x	
SALEM Twp Fire	5	7			x	x	x	
TURTLECREEK Twp Fire	4	14			x	x	x	
UNION Twp Fire	5	15			x	x	x	
WAYNE Twp Fire	10	6			x	x	x	
Non-Public Safety								
Clearcreek Admin								x
Clearcreek Road								x
Clearcreek Twp Admin								x
Warren County Departments								
Commissioner's Office							x	
Educational Service Center		x						
Emergency Services		x					x	
Garage								x
Telecom		x					x	
Water/Sewer							x	x

MDC: mobile data computer in vehicles used for one or more of the following: receiving dispatched incidents from Emergency Services, messaging, wants & warrants, mapping, RMS, FBR, ePCR, etc.

RSA Token: a two-factor authentication keychain with a 6-digit code required to access certain files.

Law RMS: Law Records Mgt System - program to retrieve incident details, report to State.

Law FBR: Field-Based Reporting software maintained by Telecom.

Fire RMS: Fire Records Mgt System - program to retrieve fire incident details, report to State.

ePCR: Electronic Patient Care Reporting software for EMS workers.

Remote Access: a money-saving measure allowing communities to access the WCPSN without expensive infrastructure.

Area Network Support: the canopies and data systems that ride on the County's microwave system.

The Divisions of Telecommunications

Radio Systems Team | Team Lead: Gary Hardwick 3 employees

Purpose	5-Year Goals
<ul style="list-style-type: none"> Radio Shop - We maintain our daily focus to provide dependable communications capabilities for our Public Safety and Public Works radio users. By maintaining a stock of repair parts and batteries, we provide timely service to minimize downtime for our subscribers equipment. Our cache of rapid deployment portable radios provide 'instant' support to mitigate intense, short term, requirements for specialized communications during disaster remediation or special event direction & control. Systems Management, Infrastructure - We provide 24/7/365 'first call' response for our Public Safety Systems for Dispatch and our tower sites. This insures maximum reliability & minimum downtime for our Voice communications & Data backbone/backhaul (communications path availability exceeds 99.999%) 	<ul style="list-style-type: none"> Continue to upgrade Microwave Data distribution network to provide more links and better bandwidth for Water, Wastewater, WCPSN, County Data, Radio & Telephone users that depend on fast, reliable, Ethernet, Internet, Scada, RoIP, VoIP & TDM service connections. Enhance our radio systems and programming to seamlessly mesh our Subscribers operations with our Regions changing interoperable communications environment. Continue to provide Systems, support and programming to keep our subscribers radios current with the rapid convergence of communications technology.

The Proof is in the Numbers **1** Radio System Network Operations Center (NOC) hardened with layered redundancy and Emergency power. **10** Tower Sites with equipment, shelters & emergency power.

14 public safety grade microwave links for the Data Backbone. **44** Microwave links for Public Works Information Backhaul. **1180**

handheld Portable radios. **754** Mobile radios (+54 from last year).

230 Fixed Base stations. **178**

Control base stations including School Emergency radios (+17 from last year). In 2015, our radio subscription

base of **70** agencies made **6,394,598** total calls with **519,623** minutes of conversation (equivalent of continuous talk for **361 days!**)



Telephone Systems Team | Team Lead: Garrett Wilson | 6 employees

Purpose	5-Year Goals
<ul style="list-style-type: none"> ▪ Work Orders - installation, operation, configuration, maintenance and repair of all county-owned telephone / communications equipment and circuitry. ▪ Telephone Service - Voice Mail, Fax Lines, Automated Attendant, Automatic Call Distribution, and interactive informational Recordings. These are billed to the agencies. ▪ Telecommunications Equipment/Services Invoicing and recording of accounts receivables for all related equipment and services billed by Telecom's divisions. ▪ Cellular/Pager Service Receivables - non-commissioner funded, billed directly to the agencies. ▪ IC Solutions Inmate Services - Warren County receives commission revenue based on the amount of calls completed by inmates at the County Jail. We have significantly increased our call volume and revenue without impacting the family/friends of our inmates by switching to IC Solutions in 2004. ▪ Engraving - accountability tags, signs, radios, fire passports and miscellaneous engraving for County and Public Safety Departments. 	<ul style="list-style-type: none"> ✓ Replace 9-1-1 Phone System in 2015 (end of life is Q1 - 2015). ✓ Replace current County phone system with VoIP, including new switchboard. ▪ Convert Warren County's government buildings to new VoIP system as funds allow. ▪ Be IP (internet protocol) and NexGen ready for when state is able to support it in 3-5 years.

The Telephone Division of Telecommunications processes the majority of its work orders as an On-Call basis serving over 100 County, State, Federal and Private Agencies. The Telephone Division wires all telephone and data drops in all County buildings as well a manages all moves, changes and installing of temporary service to those displaced by construction. The division also provides all cellular and alpha paging services to county offices as well as assists Fire and Police Agencies of Warren County in obtaining contracts and maintenance of existing units.

<i>Mobile Data Receivables</i>	
QUARTER	AMOUNT
1st Quarter	\$24,240.00
2nd Quarter	\$24,181.50
3rd Quarter	\$23,503.35
4th Quarter	\$23,708.90
TOTAL:	\$95,633.75

EQUIPMENT	
DEVICE	COUNT
Smartphones	247
Aircards	42
Cell Phones	81
Tablets	79
TOTAL:	449

520 Justice Drive Work Completed	
<i>We were kept busy at end-of-year with the the building's communications needs. Cable had to be pulled and terminated in the telephony closets in order to supply communication needs for Warren County Court Services, Prosecutors, Board of Elections, Emergency Services and the 9-1-1 Dispatch Center.</i>	
250 Pr Cable	Pulled and terminated from 500 Justice to lower level telephony closet at 520 Justice
Cable TV	Pulled cable from 500 Justice to 520 Justice to supply service for 21 TV's (ES/DISP/EOC/PROS)
100 Pr Cable	Pulled and terminated from lower level telephony closet to Dispatch Data Closet
100 Pr Cable	Pulled and terminated from lower level telephony closet to 2nd floor telephony closet
50 Pr Cable	Pulled and terminated from the lower level telephony closet to 3rd floor telephony closet
CAT-6 Drops	Pulled and terminated drops for 19 Network Controlled Clocks in Emergency Serv/Disp/EOC
CAT-6 Drops	Pulled and terminated/Moved 41 lines for Court Services
CAT-6 Drops	Pulled and terminated/Moved 28 lines for Emergency Services and 9-1-1 Dispatch Center
Cable TV	Installed (4) 8-port Cable TV Amplifier's for Emergency Services/Dispatch/EOC/Prosecutor's
CAT-6 Drops	Pulled and terminated 16 drops for phones/time clock/etc for Emergency Services
CAT-6 Drops	Pulled and terminated 13 drops for Prosecutor's Office
CAT-6 Drops	Pulled and terminated 12 drops for wireless access points for 520 Justice Drive
CAT-6 Drops	Pulled and terminated 14 drops/Moved 16 drops for Board of Elections
CAT-6 Drops	Pulled and terminated 5 extra drops/Moved 36 drops for Court Services
<p>These projects were ongoing throughout 2015 along with some new projects.</p> <p><i>Kicked off the new 911 system and got Started on the VOIP RFP for phase one.</i></p> <p><i>Started remodel of The Telecom Office area Phase 1 completed</i></p> <p><i>Moved Dispatch center from 500 Justice to 520 Justice</i></p> <p><i>Add cell services to 520 Justice, 430 Justice, 410 East and 900 Memorial Dr</i></p> <p><i>Assisted Radio in adding repeaters into 520 Justice</i></p> <p><i>Pulled multiple fibre through out 500 Justice and 822 Memorial Dr for Data up grade</i></p> <p><i>Rewired and reprogramed Mason title office</i></p> <p><i>520 and 500 Justice dr Panic buttons installed</i></p> <p><i>Cat-6 Drops Pulled and terminated 5 extra drops to Board of Elections</i></p> <p><i>Weather Radio Antenna and cabling ran for EMS at 520 Justice Dr</i></p>	

The Divisions of Telecommunications

Telephone Systems Team | Team Lead: Garrett Wilson | 6 employees

Telecommunications Equipment/Services Invoicing

The Telephone Division is responsible for the invoicing and recording of accounts receivables for all related equipment and services billed by Telecommunications Divisions.

MONTH	TST	DST	RST	CRT
January	\$1,431.00	\$189.00	\$995.00	\$0.00
February	\$452.07	\$168.00	\$2,476.00	\$0.00
March	\$1,907.24	\$84.00	\$1,705.00	\$27,745.08
April	\$3,319.62	\$122.00	\$6,808.60	\$6,726.08
May	\$857.58	\$588.00	\$881.00	\$0.00
June	\$1,211.90	\$9,000.00	\$327.00	\$0.00
July	\$12,619.32	\$885.00	\$1,835.00	\$0.00
August	\$337.70	\$927.00	\$2,111.00	\$0.00
September	\$866.14	\$0.00	\$16,249.85	\$0.00
October	\$5,065.88	\$726.00	\$980.00	\$0.00
November	\$2,005.85	\$905.15	\$7,724.45	\$20,178.24
December	\$817.39	\$0.00	\$788.00	\$0.00
TOTAL:	\$30,891.69	\$13,594.15	\$42,880.90	\$54,649.40

IC Solutions Inmate Services - Warren County receives

commission revenue based on the total amount of calls completed by inmates at the County Jail. We have significantly increased our call volume and revenue without impacting the family and friends of our inmates by switching to IC Solutions in 2004.

January	\$9,721.39	July	\$11,829.43
February	\$10,243.75	August	\$10,700.14
March	\$9,942.24	September	\$10,108.99
April	\$10,224.10	October	\$11,397.66
May	\$12,716.76	November	\$11,129.26
June	\$11,242.78	December	\$12,203.24
TOTAL:	\$131,459.74		

Telephone Service - Voice Mail, Fax Lines, Automated Attendant, Automatic Call Distribution, and interactive informational Recordings to solve our customer's needs. These are non-commissioner funded and billed to agencies.

January	\$24,956.15	July	\$21,617.44
February	\$25,131.99	August	\$21,913.26
March	\$25,236.86	September	\$21,724.83
April	\$26,734.43	October	\$21,507.83
May	\$22,023.83	November	\$21,510.85
June	\$22,113.31	December	\$21,457.48
TOTAL:	\$275,928.26		

Cellular/Mobile Data /Pager Service Expenditures

Although the quantity of wireless devices increased for Commissioner-funded agencies, we once again implemented a new service plan resulting in a savings for the county.

MONTH	CELLULAR	MOBILE DATA
January	\$16,857.95	\$11,406.97
February	\$16,881.79	\$10,489.08
March	\$18,380.82	\$10,960.30
April	\$20,675.96	\$10,941.87
May	\$16,842.02	\$10,986.41
June	\$17,097.91	\$11,007.72
July	\$30,913.65	\$10,299.86
August	\$18,142.16	\$10,695.09
September	\$18,689.48	\$10,415.10
October	\$23,790.97	\$10,764.57
November	\$19,280.05	\$10,658.08
December	\$19,712.61	\$10,638.43
TOTAL:	\$237,265.37	\$129,263.48

Work Orders

installation, operation, configuration, maintenance and repair of county-owned telephone/communications equipment and circuitry.

Telephone	1,048
Cellular	797
E911	63
Data Drops	106
Voice Mail	93
Call Records	8
Mobile Data	258
Total	2373

Cellular/Pager Service Receivables

Non-commissioner funded and billed directly to the agencies.

MONTH	CELLULAR
January	\$5,884.10
February	\$6,124.32
March	\$6,046.09
April	\$6,381.00
May	\$6,761.68
June	\$6,397.24
July	\$7,965.65
August	\$7,206.03
September	\$7,178.63
October	\$7,332.87
November	\$7,146.84
December	\$7,168.53
TOTAL:	\$81,592.98

Engraving - The Telephone Division engraves various types of signage and identification badges/plates for County Agencies, Police and Fire Agencies as well as other Political Subdivisions.

AGENCY	ACCOUNTABILITY	SIGNS	RADIOS	PASSPORTS	MISC
COUNTY		56			5
FIRE	1043			9	
1963 TOTAL	1043	56	0	9	5